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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/563,962   | 06/13/2006  | Takafumi Matsumura   | 056205.57280US      | 7352             |
| 23911  | 7590        | 11/26/2007           | EXAMINER            |                  |
| CROWELL & MORING LLP<br>INTELLECTUAL PROPERTY GROUP<br>P.O. BOX 14300<br>WASHINGTON, DC 20044-4300 |             |                      | RUSH, ERIC          |                  |
|  |             | ART UNIT             |                     | PAPER NUMBER     |
|  |             | 2624                 |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                 |                  |
|------------------------------|-----------------|------------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s)     |
|                              | 10/563,962      | MATSUMURA ET AL. |
|                              | Examiner        | Art Unit         |
|                              | Eric Rush       | 2624             |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 January 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 13 June 2006 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3 July 2007, 10 January 2006.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 15, and 19 are rejected on the ground of nonstatutory double patenting over independent claims 1 and 8 of U. S. Patent No. 6,993,160 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

Although the claims are not identical, the present claims are broader and therefore if issued it would unduly extend the timewise monopoly given to the claims of U.S. Patent No. 6,993,160.

3. Claims 16 – 18 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 8 of U.S. Patent No. 6,993,160. Although the conflicting claims are not identical, they are not patentably distinct from each other because U.S. Patent No. 6,993,160 discloses a light source and the claims of the instant application define the light source as an infrared light source. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the light source of U.S. Patent No. 6,993,160 to be an infrared light source because the use of infrared light sources are notoriously well known in the art and the advantage to such a light source modification for viewing under the surface of the skin, i.e. blood vessels, would be drastic.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 4, 6 – 7 and 14 – 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagasaka et al. U.S. Patent No. 6,970,234.

- With regards to claim 1, Nagasaka et al. teach a personal identification device comprising a light source for illuminating light to a target to be identified, (Nagasaka et al., Column 3 Lines 53 - 65) and a light receiving element row containing a plurality of light receiving elements which receive the light illuminated from said light source, (Nagasaka et al., Column 3 Lines 53 – 62, imaging unit) where information representing a living body feature of said target to be identified is produced from outputs of said light receiving element row, (Nagasaka et al., Column 5 Lines 47 - 58) thereby performing personal identification based on the produced information. (Nagasaka et al., Column 7 Lines 33 - 43)
  
- With regards to claim 2, Nagasaka et al. teach a personal identification device comprising a light source for illuminating light to a target to be identified, (Nagasaka et al., Column 3 Lines 53 - 65) and a light receiving element row containing a plurality of light receiving elements which receive the light illuminated from said light source, (Nagasaka et al., Column 3 Lines 53 – 62, imaging unit) wherein when said target to be identified is relatively scanned with respect to said light receiving element row, (Nagasaka et al., Column 5 Lines 47 - 58) a two-dimensional image representing a living body feature of said target to be identified is produced from outputs of said light receiving element row (Nagasaka et al.,

Column 5 Lines 47 – 58) and relative displacement information of said target to be identified, (Nagasaki et al., Column 4 Lines 38 - 58, the button along with the guided groove relay displacement information of said target to the personal identification device, i.e. correct position of the finger and/or distance from imaging unit) thereby performing personal identification based on the produced image. (Nagasaki et al., Column 7 Lines 33—43)

- With regards to claim 3, Nagasaki et al. teach a personal identification device comprising an infrared source for illuminating an infrared ray to a target to be identified, (Nagasaki et al., Column 4 Lines 4 - 27) and a light receiving element row containing a plurality of light receiving elements which receive the infrared ray illuminated from said infrared source, (Nagasaki et al., column 4 Lines 4 - 27) wherein when said target to be identified is relatively scanned with respect to said light receiving element row, (Nagasaki et al., Column 5 lines 47 - 58) a two-dimensional image representing a blood vessel pattern of said target to be identified is produced from outputs of said light receiving element row (Nagasaki et al., Column 5 Lines 47 – 58) and relative displacement information of said target to be identified, (Nagasaki et al., Column 4 Lines 38 - 58) thereby performing personal

identification based on the produced image. (Nagasaki et al.,  
Column 7 Lines 33 - 43)

- With regards to claim 4, Nagasaki et al. teach the personal identification device according to claim 3, wherein said target to be identified is a human hand or finger. (Nagasaki et al., Column 5 Lines 47 - 58)
- With regards to claim 6, Nagasaki et al. teach the personal identification device according to claim 2, wherein a position detecting device for detecting a position of said target to be identified is disposed, (Nagasaki et al., Column 4 Lines 38 - 58) and said two-dimensional image of said target to be identified is produced from the outputs of said light receiving element row and position information from said position detecting device. (Nagasaki et al., Column 5 Lines 47 – 58, "With a press of a switch, an image signal representing a hemal pattern is acquired")
- With regards to claim 7, Nagasaki et al. teach the personal identification device according to claim 2, wherein an identified-target detecting device for detecting the presence or absence of said target to be identified is disposed in a position away from said light receiving element row. (Nagasaki et al., Column 4 Lines 38 –

58, the button along with the guided groove relay displacement information of said target to the personal identification device, i.e. correct position of the finger and/or distance from imaging unit, and with the activation of the button the presence of the target is identified Column 5 Lines 47 - 58)

- With regards to claim 14, Nagasaka et al. teach the personal identification device according to claim 2, wherein said light receiving element row is provided with a filter member allowing transmission of only a component of incident light, which substantially perpendicularly enter said light receiving element row. (Nagasaki et al., Column 3 Line 53 – Column 4 Line 3)
- With regards to claim 15, Nagasaka et al. teach a personal identification device comprising a casing, (Nagasaki et al., Column 3 Line 63 – Column 4 Line 3) and a light source and a light receiving element row both disposed in said casing, (Nagasaki et al., Column 3 Line 53 – Column 4 Line 3) said device operating such that when a finger is inserted in said casing, the light from said light source is illuminated to the finger, (Nagasaki et al., Column 4 Lines 4 - 16) the light having passed through the finger is detected by said light receiving element row, (Nagasaki et al., Column 5 lines 47 - 58) and a blood vessel pattern of the finger is produced

from outputs of said light receiving element row, (Nagasaki et al., Column 5 Lines 47 – 58) thereby performing personal identification based on the produced blood vessel pattern, (Nagasaki et al., Column 7 Lines 33 - 43) wherein said casing has a cavity in which the finger is inserted, (Nagasaki et al., Column 3 Line 53 – Column 4 Line 3) and said light receiving element row is arranged perpendicularly to a direction of depth of said cavity. (Nagasaki et al., Column 4 Lines 4 – 16, Column 8 Lines 11 - 18)

With regards to claims 16 and 17, Nagasaki et al. teach a personal identification device comprising a C-shaped support member including a first member, a second member and a third member for connecting said first and second members to each other, (Nagasaki et al., Column 9 Lines 5 - 22) an infrared source mounted to said first member, (Nagasaki et al., Column 4 Lines 4 – 27, Column 9 Lines 5 - 22) and a light receiving element row mounted to said second member, (Nagasaki et al., Column 9 Lines 5 - 22) said device operating such that when a finger is scanned over said light receiving element row, an infrared ray from said infrared source is illuminated to the finger, (Nagasaki et al., Column 4 Lines 4 – 27, Column 4 Lines 38 - 58) the infrared ray having passed through the finger is detected by said light receiving element row, (Nagasaki et al., Column 5 lines 47 - 58) and a blood

vessel pattern of the finger is produced from outputs of said light receiving element row, (Nagasaki et al., Column 5 lines 47 - 58) thereby performing personal identification based on the produced blood vessel pattern. (Nagasaki et al., Column 7 Lines 33 - 43)

With regards to claim 18, Nagasaki et al. teach a personal identification device comprising a casing, (Nagasaki et al., Column 3 Line 63 – Column 4 Line 3) and an infrared source and a light receiving element row both disposed in said casing, (Nagasaki et al., Column 3 Line 53 – Column 4 Line 3, Column 4 Lines 4 - 16) said device operating such that when a finger is inserted in said casing, an infrared ray from said infrared source is illuminated to the finger, (Nagasaki et al., Column 4 Lines 4 - 16) the infrared ray having passed through the finger is detected by said light receiving element row, (Nagasaki et al., Column 5 Lines 47 – 58) and a blood vessel pattern of the finger is produced from outputs of said light receiving element row, (Nagasaki et al., Column 5 Lines 47 – 58) thereby performing personal identification based on the produced blood vessel pattern, (Nagasaki et al., Column 7 Lines 33 - 43) wherein said casing has a smooth inner surface to prevent a part of the infrared ray from said infrared source, which has been reflected by the finger, from entering said light receiving element row. (Nagasaki et al., Column 3 Line 63 – Column 4 Line 3)

- With regards to claim 19, Nagasaka et al. teach the personal identification device according to claim 1, wherein personal identification is performed by comparing a previously registered feature parameter and a feature parameter of an image obtained from the outputs of said light receiving element row. (Nagasaki et al., Column 7 Lines 33 - 43)

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 5 and 10 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaki et al. U.S. Patent No. 6,970,234.

- With regards to claim 5, Nagasaka et al. teach the personal identification device according to claim 2. Nagasaka et al. is silent to wherein said light receiving element row contains a plurality of light receiving elements arranged in line. Examiner takes official notice of the fact that light receiving element rows contain a plurality of light receiving elements being arranged in a line is well known in the art. Therefore it would have been obvious to include such a light receiving element with the teachings of Nagasaka et al. to obtain image information in a standard format.
- With regards to claim 10, Nagasaka et al. teach the personal identification device according to claim 2. Nagasaka et al. is silent to wherein said light receiving element row contains a plurality of light receiving elements arrayed along a straight line. Examiner takes official notice of the fact that light receiving element rows contain a plurality of light receiving elements being arranged in a line is well known in the art. Therefore it would have been obvious to include such a light receiving element with the teachings of Nagasaka et al. to obtain image information in a standard format.
- With regards to claim 11, Nagasaka et al. teach the personal identification device according to claim 2. Nagasaka et al. is silent

to wherein said light receiving element row contains a plurality of light receiving elements arrayed along a curved line. Examiner takes official notice of the fact that light receiving element rows contain a plurality of light receiving elements being arranged in a line or any other shape is well known in the art. Therefore it would have been obvious to include such a light receiving element with the teachings of Nagasaka et al. to obtain image information in a standard format consistent with the shape of a finger.

- With regards to claim 12, Nagasaka et al. teach the personal identification device according to claim 2. Nagasaka et al. is silent wherein said light receiving element row comprises a plurality of light receiving element rows, and said plurality of light receiving element rows are arranged along a curved line. Examiner takes official notice of the fact that light receiving element rows contain a plurality of light receiving elements being arranged in a line or any other shape is well known in the art. Therefore it would have been obvious to include such a light receiving element with the teachings of Nagasaka et al. to obtain image information in a standard format consistent with the shape of a finger.

- With regards to claim 13, Nagasaka et al. teach the personal identification device according to claim 10. Nagasaka et al. is silent

to wherein an interval between two adjacent light receiving elements in said light receiving element row is from 0.02 mm to 0.5 mm. Examiner takes official notice of the fact that spacing between light receiving elements in a light receiving means being from 0.02 mm to 0.5 mm is well known in the art. Therefore it would have been obvious to include such spacing within this range with the teachings of Nagasaka et al. in order to generate a detailed blood vessel image for identification purposes.

6. Claims 8 - 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaka et al. U.S. Patent No. 6,970,234 as applied to claim 7 above, and further in view of Chou U.S. Patent No. 7,200,250.

With regards to claims 8 and 9, Nagasaka et al. teach the personal identification device according to claim 7, Nagasaka et al. fail to teach wherein said identified-target detecting device is disposed in plural, a speed of said target to be identified is computed from a difference between passage times of one end of said target to be identified, which are detected by said plurality of identified-target detecting devices, and distance correction of said image in a scan direction is performed based on the speed of said target to be identified. Chou teaches wherein said identified-target detecting device is disposed in plural, (Chou, Figs. 4, 7, & 10, Column 3

Lines 50 - 63) a speed of said target to be identified is computed from a difference between passage times of one end of said target to be identified, (Chou, Column 3 Line 50 – Column 4 Line 14) which are detected by said plurality of identified-target detecting devices, (Chou, Column 3 Line 50 – Column 4 Line 14, Column 5 Line 23 – Column 6 Line 8) and distance correction of said image in a scan direction is performed based on the speed of said target to be identified. (Chou, Fig. 10, Column 5 Line 23 – Column 6 Line 8, Column 7 Lines 5 - 11) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Nagasaka et al. to include the teachings of Chou. This modification would have been prompted in order to incorporate a sweep-type imaging sensor into the system of Nagasaka et al. This would have been necessitated in order to allow for smaller and more compact identification systems.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaka et al. U.S. Patent No. 6,970,234 as applied to claim 6 above, and further in view of Asai et al. U.S. Patent No. 4,701,959.

- With regards to claim 20, Nagasaka et al. teach the personal identification device according to claim 6. Nagasaka et al. teach wherein said position detecting device is provided with a button

capable of being pushed by the finger. (Nagasaki et al., Column 8 Lines 11 – 34) Nagasaki et al. fail to teach wherein cleaning means is mounted to said button, and a surface of said light receiving element row is cleaned with scan of said button. Asai et al. teach wherein cleaning means is mounted to said button, (Asai et al., Fig. 3) and a surface of said light receiving element row is cleaned with scan of said button. (Asai et al., Column 4 Lines 33 – 64) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Nagasaki et al. to include the teachings of Asai et al. This modification would have been prompted because Nagasaki et al. show concern for a clean identification surface Column 4 Lines 51 - 60. Therefore a more proactive approach to cleaning such as that disclosed by Asai et al. would have been prompted for a more effective cleaning approach.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

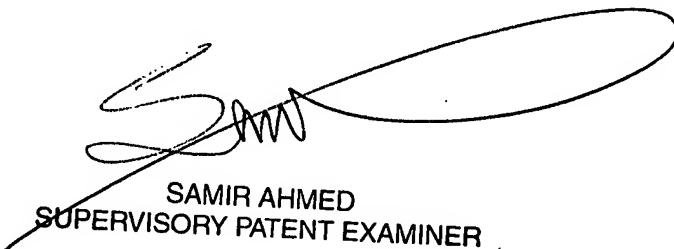
- Chou et al. U.S. Patent No. 7,099,497; which is directed towards a capacitive fingerprint sensor with cleaning means disclosed.
- Prokoski U.S. Patent No. 6,920,236; which is directed to a dual band biometric identification system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Rush whose telephone number is (571) 270-3017. The examiner can normally be reached on 7:30AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571) 272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ER



SAMIR AHMED  
SUPERVISORY PATENT EXAMINER